/600

CRF Errors Edited by the STIC Systems Branch

Serial Number: __09/930,020ß__   CRF Edit Date: __8/24/04__
                                         Edited by: ___/8z___

ENTERED

_____ Realigned their either amino acid numbers/text in cases where the sequence text happened to next line

_____ Corrected the SEQ ID NO. Sequence numbers edited were:

_____

_____ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

_____

__/__ Deleted: __/__ invalid beginning/end-of-file text ; ___ page numbers

_____ Inserted mandatory headings/numeric identifiers, specifically:

_____

_____ Moved responses to same line as heading/numeric identifier, specifically:

_____

_____ Other:

_____
_____
_____

Revised 09/09/2003

RAW SEQUENCE LISTING   DATE: 08/24/2004
PATENT APPLICATION: US/09/930,020B   TIME: 10:35:45

Input Set : A:\PTO.AMC.txt
Output Set: N:\CRF4\08242004\I930020B.raw

```
 3 <110> APPLICANT: Gish, Kurt C.
 4        Mack, David H.
 5        Wilson, Keith E.
 7 <120> TITLE OF INVENTION: Methods of diagnosis of colorectal cancer, compositions, and
 8        methods of screening for colorectal cancer modulators
10 <130> FILE REFERENCE: 05882.0168.CPUS01
12 <140> CURRENT APPLICATION NUMBER: US 09/930,020B
13 <141> CURRENT FILING DATE: 2001-08-14
15 <150> PRIOR APPLICATION NUMBER: US 09/663,733
16 <151> PRIOR FILING DATE: 2000-09-15
18 <160> NUMBER OF SEQ ID NOS: 3
20 <170> SOFTWARE: PatentIn version 3.2
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 3375
24 <212> TYPE: DNA
25 <213> ORGANISM: Homo sapiens
27 <400> SEQUENCE: 1
28 gacagtgttc gcggctgcac cgctcggagg ctgggtgacc cgcgtagaag tgaagtactt    60
30 ttttatttgc agacctgggc cgatgccgct ttaaaaaacg cgaggggctc tatgcacctc   120
32 cctggcggta gttcctccga cctcagccgg gtcgggtcgt gccgccctct cccaggagag   180
34 acaaacaggt gtcccacgtg gcagccgcgc cccgggcgcc cctcctgtga tcccgtagcg   240
36 ccccctggcc cgagccgcgc ccgggtctgt gagtagagcc gcccgggcac cgagcgctgg   300
38 tcgccgctct ccttccgtta tatcaacatg cccccttttcc tgttgctgga ggccgtctgt   360
40 gttttcctgt tttccagagt gcccccatct ctccctctcc aggaagtcca tgtaagcaaa   420
42 gaaaccatcg ggaagatttc agctgccagc aaaatgatgt ggtgctcggc tgcagtggac   480
44 atcatgtttc tgttagatgg gtctaacagc gtcgggaaag ggagctttga aaggtccaag   540
46 cactttgcca tcacagtctg tgacggtctg gacatcagcc ccgagagggt cagagtggga   600
48 gcattccagt tcagttccac tcctcatctg gaattcccct tggattcatt ttcaacccaa   660
50 caggaagtga aggcaagaat caagaggatg gttttcaaag gagggcgcac ggagacggaa   720
52 cttgctctga aataccttct gcacagaggg ttgcctggag gcagaaatgc ttctgtgccc   780
54 cagatcctca tcatcgtcac tgatgggaag tcccaggggg atgtggcact gccatccaag   840
56 cagctgaagg aaaggggtgt cactgtgttt gctgtggggg tcaggtttcc caggtgggag   900
58 gagctgcatg cactggccag cgagcctaga gggcagcacg tgctgttggc tgagcaggtg   960
60 gaggatgcca ccaacggcct cttcagcacc ctcagcagct cggccatctg ctccagcgcc  1020
62 acgccagact gcagggtcga ggctcacccc tgtgagcaca ggacgctgga gatggtccgg  1080
64 gagttcgctg gcaatgcccc atgctggaga ggatcgcggc ggacccttgc ggtgctggct  1140
66 gcacactgtc ccttctacag ctggaagaga gtgttcctaa cccaccctgc cacctgctac  1200
68 aggaccacct gcccaggccc ctgtgactcg cagccctgcc agaatggagg cacatgtgtt  1260
70 ccagaaggac tggacggcta ccagtgcctc tgcccgctgg cctttggagg ggaggctaac  1320
72 tgtgccctga agctgagcct ggaatgcagg gtcgacctcc tcttcctgct ggacagctct  1380
74 gcgggcacca ctctggacgg cttcctgcgg gccaaagtct tcgtgaagcg gtttgtgcgg  1440
76 gccgtgctga gcgaggactc tcgggcccga gtgggtgtgg ccacatacag cagggagctg  1500
78 ctggtggcgg tgcctgtggg ggagtaccag gatgtgcctg acctggtctg gagcctcgat  1560
```

RAW SEQUENCE LISTING
PATENT APPLICATION: **US/09/930,020B**

DATE: 08/24/2004
TIME: 10:35:45

Input Set : **A:\PTO.AMC.txt**
Output Set: **N:\CRF4\08242004\I930020B.raw**

```
 80 ggcattccct tccgtggtgg ccccaccctg acgggcagtg ccttgcggca ggcggcagag   1620
 82 cgtggcttcg ggagcgccac caggacaggc caggaccggc cacgtagagt ggtggttttg   1680
 84 ctcactgagt cacactccga ggatgaggtt gcgggcccag cgcgtcacgc aagggcgcga   1740
 86 gagctgctcc tgctgggtgt aggcagtgag gccgtgcggg cagagctgga ggagatcaca   1800
 88 ggcagcccaa agcatgtgat ggtctactcg gatcctcagg atctgttcaa ccaaatccct   1860
 90 gagctgcagg ggaagctgtg cagccggcag cggccagggt gccggacaca agccctggac   1920
 92 ctcgtcttca tgttggacac ctctgcctca gtagggcccg agaattttgc tcagatgcag   1980
 94 agctttgtga gaagctgtgc cctccagttt gaggtgaacc ctgacgtgac acaggtcggc   2040
 96 ctggtggtgt atggcagcca ggtgcagact gccttcgggc tggacaccaa acccacccgg   2100
 98 gctgcgatgc tgcgggccat tagccaggcc ccctacctag gtggggtggg ctcagccggc   2160
100 accgccctgc tgcacatcta tgacaaagtg atgaccgtcc agaggggtgc ccggcctggt   2220
102 gtccccaaag ctgtggtggt gctcacaggc gggagaggcg cagaggatgc agccgttcct   2280
104 gcccagaagc tgaggaacaa tggcatctct gtcttggtcg tgggcgtggg gcctgtccta   2340
106 agtgagggtc tgcggaggct tgcaggtccc cgggattccc tgatccacgt ggcagcttac   2400
108 gccgacctgc ggtaccacca ggacgtgctc attgagtggc tgtgtggaga agccaagcag   2460
110 ccagtcaacc tctgcaaacc cagcccgtgc atgaatgagg gcagctgcgt cctgcagaat   2520
112 gggagctacc gctgcaagtg tcgggatggc tgggagggcc cccactgcga gaaccgtgag   2580
114 tggagctctt gctctgtatg tgtgagccag ggatggattc ttgagacgcc cctgaggcac   2640
116 atggctcccg tgcaggaggg cagcagccgt acccctccca gcaactacag agaaggcctg   2700
118 ggcactgaaa tggtgcctac cttctggaat gtctgtgccc caggtcctta gaatgtctgc   2760
120 ttcccgccgt ggccaggacc actattctca ctgagggagg aggatgtccc aactgcagcc   2820
122 atgctgctta gagacaagaa agcagctgat gtcacccaca aacgatgttg ttgaaaagtt   2880
124 ttgatgtgta agtaaatacc cactttctgt acctgctgtg ccttgttgag gctatgtcat   2940
126 ctgccacctt tcccttgagg ataaacaagg ggtcctgaag acttaaattt agcggcctga   3000
128 cgttcctttg cacacaatca atgctcgcca gaatgttgtt gacacagtaa tgcccagcag   3060
130 aggcctttac tagagcatcc tttggacggc gaaggccacg gcctttcaag atggaaagca   3120
132 gcagcttttc cacttcccca gagacattct ggatgcattt gcattgagtc tgaaaggggg   3180
134 cttgagggac gtttgtgact tcttggcgac tgccttttgt gtgtggaaga gacttggaaa   3240
136 ggtctcagac tgaatgtgac caattaacca gcttggttga tgatggggga ggggctgagt   3300
138 tgtgcatggg cccaggtctg gagggccacg taaaatcgtt ctgagtcgtg agcagtgtcc   3360
140 accttgaagg tcttc                                                     3375
143 <210> SEQ ID NO: 2
144 <211> LENGTH: 807
145 <212> TYPE: PRT
146 <213> ORGANISM: Homo sapiens
148 <400> SEQUENCE: 2
150 Met Pro Pro Phe Leu Leu Leu Glu Ala Val Cys Val Phe Leu Phe Ser
151 1               5                   10                  15
154 Arg Val Pro Pro Ser Leu Pro Leu Gln Glu Val His Val Ser Lys Glu
155             20                  25                  30
158 Thr Ile Gly Lys Ile Ser Ala Ala Ser Lys Met Met Trp Cys Ser Ala
159         35                  40                  45
162 Ala Val Asp Ile Met Phe Leu Leu Asp Gly Ser Asn Ser Val Gly Lys
163     50                  55                  60
166 Gly Ser Phe Glu Arg Ser Lys His Phe Ala Ile Thr Val Cys Asp Gly
167 65                  70                  75                  80
170 Leu Asp Ile Ser Pro Glu Arg Val Arg Val Gly Ala Phe Gln Phe Ser
171             85                  90                  95
174 Ser Thr Pro His Leu Glu Phe Pro Leu Asp Ser Phe Ser Thr Gln Gln
```

```
175                 100                  105                 110
178 Glu Val Lys Ala Arg Ile Lys Arg Met Val Phe Lys Gly Gly Arg Thr
179         115                 120                 125
182 Glu Thr Glu Leu Ala Leu Lys Tyr Leu Leu His Arg Gly Leu Pro Gly
183     130                 135                 140
186 Gly Arg Asn Ala Ser Val Pro Gln Ile Leu Ile Ile Val Thr Asp Gly
187 145                 150                 155                 160
190 Lys Ser Gln Gly Asp Val Ala Leu Pro Ser Lys Gln Leu Lys Glu Arg
191                 165                 170                 175
194 Gly Val Thr Val Phe Ala Val Gly Val Arg Phe Pro Arg Trp Glu Glu
195             180                 185                 190
198 Leu His Ala Leu Ala Ser Glu Pro Arg Gly Gln His Val Leu Leu Ala
199         195                 200                 205
202 Glu Gln Val Glu Asp Ala Thr Asn Gly Leu Phe Ser Thr Leu Ser Ser
203     210                 215                 220
206 Ser Ala Ile Cys Ser Ser Ala Thr Pro Asp Cys Arg Val Glu Ala His
207 225                 230                 235                 240
210 Pro Cys Glu His Arg Thr Leu Glu Met Val Arg Glu Phe Ala Gly Asn
211             245                 250                 255
214 Ala Pro Cys Trp Arg Gly Ser Arg Arg Thr Leu Ala Val Leu Ala Ala
215             260                 265                 270
218 His Cys Pro Phe Tyr Ser Trp Lys Arg Val Phe Leu Thr His Pro Ala
219         275                 280                 285
222 Thr Cys Tyr Arg Thr Thr Cys Pro Gly Pro Cys Asp Ser Gln Pro Cys
223     290                 295                 300
226 Gln Asn Gly Gly Thr Cys Val Pro Glu Gly Leu Asp Gly Tyr Gln Cys
227 305                 310                 315                 320
230 Leu Cys Pro Leu Ala Phe Gly Gly Glu Ala Asn Cys Ala Leu Lys Leu
231             325                 330                 335
234 Ser Leu Glu Cys Arg Val Asp Leu Leu Phe Leu Leu Asp Ser Ser Ala
235         340                 345                 350
238 Gly Thr Thr Leu Asp Gly Phe Leu Arg Ala Lys Val Phe Val Lys Arg
239         355                 360                 365
242 Phe Val Arg Ala Val Leu Ser Glu Asp Ser Arg Ala Arg Val Gly Val
243     370                 375                 380
246 Ala Thr Tyr Ser Arg Glu Leu Leu Val Ala Val Pro Val Gly Glu Tyr
247 385                 390                 395                 400
250 Gln Asp Val Pro Asp Leu Val Trp Ser Leu Asp Gly Ile Pro Phe Arg
251             405                 410                 415
254 Gly Gly Pro Thr Leu Thr Gly Ser Ala Leu Arg Gln Ala Ala Glu Arg
255             420                 425                 430
258 Gly Phe Gly Ser Ala Thr Arg Thr Gly Gln Asp Arg Pro Arg Arg Val
259         435                 440                 445
262 Val Val Leu Leu Thr Glu Ser His Ser Glu Asp Glu Val Ala Gly Pro
263     450                 455                 460
266 Ala Arg His Ala Arg Ala Arg Glu Leu Leu Leu Leu Gly Val Gly Ser
267 465                 470                 475                 480
270 Glu Ala Val Arg Ala Glu Leu Glu Glu Ile Thr Gly Ser Pro Lys His
271             485                 490                 495
```

```
274 Val Met Val Tyr Ser Asp Pro Gln Asp Leu Phe Asn Gln Ile Pro Glu
275             500                 505                 510
278 Leu Gln Gly Lys Leu Cys Ser Arg Gln Arg Pro Gly Cys Arg Thr Gln
279         515                 520                 525
282 Ala Leu Asp Leu Val Phe Met Leu Asp Thr Ser Ala Ser Val Gly Pro
283     530                 535                 540
286 Glu Asn Phe Ala Gln Met Gln Ser Phe Val Arg Ser Cys Ala Leu Gln
287 545                 550                 555                 560
290 Phe Glu Val Asn Pro Asp Val Thr Gln Val Gly Leu Val Val Tyr Gly
291                 565                 570                 575
294 Ser Gln Val Gln Thr Ala Phe Gly Leu Asp Thr Lys Pro Thr Arg Ala
295             580                 585                 590
298 Ala Met Leu Arg Ala Ile Ser Gln Ala Pro Tyr Leu Gly Gly Val Gly
299         595                 600                 605
302 Ser Ala Gly Thr Ala Leu Leu His Ile Tyr Asp Lys Val Met Thr Val
303     610                 615                 620
306 Gln Arg Gly Ala Arg Pro Gly Val Pro Lys Ala Val Val Val Leu Thr
307 625                 630                 635                 640
310 Gly Gly Arg Gly Ala Glu Asp Ala Ala Val Pro Ala Gln Lys Leu Arg
311             645                 650                 655
314 Asn Asn Gly Ile Ser Val Leu Val Val Gly Val Gly Pro Val Leu Ser
315             660                 665                 670
318 Glu Gly Leu Arg Arg Leu Ala Gly Pro Arg Asp Ser Leu Ile His Val
319         675                 680                 685
322 Ala Ala Tyr Ala Asp Leu Arg Tyr His Gln Asp Val Leu Ile Glu Trp
323     690                 695                 700
326 Leu Cys Gly Glu Ala Lys Gln Pro Val Asn Leu Cys Lys Pro Ser Pro
327 705                 710                 715                 720
330 Cys Met Asn Glu Gly Ser Cys Val Leu Gln Asn Gly Ser Tyr Arg Cys
331             725                 730                 735
334 Lys Cys Arg Asp Gly Trp Glu Gly Pro His Cys Glu Asn Arg Glu Trp
335             740                 745                 750
338 Ser Ser Cys Ser Val Cys Val Ser Gln Gly Trp Ile Leu Glu Thr Pro
339         755                 760                 765
342 Leu Arg His Met Ala Pro Val Gln Glu Gly Ser Ser Arg Thr Pro Pro
343     770                 775                 780
346 Ser Asn Tyr Arg Glu Gly Leu Gly Thr Glu Met Val Pro Thr Phe Trp
347 785                 790                 795                 800
350 Asn Val Cys Ala Pro Gly Pro
351             805
354 <210> SEQ ID NO: 3
355 <211> LENGTH: 5
356 <212> TYPE: PRT
357 <213> ORGANISM: Homo sapiens
360 <220> FEATURE:
361 <221> NAME/KEY: misc_feature
362 <222> LOCATION: (3)..(3)
363 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
365 <400> SEQUENCE: 3
```

RAW SEQUENCE LISTING   DATE: 08/24/2004
PATENT APPLICATION: **US/09/930,020B**   TIME: 10:35:45

Input Set : **A:\PTO.AMC.txt**
Output Set: **N:\CRF4\08242004\I930020B.raw**

W--> 367 Trp Ser Xaa Trp Ser
     368 1   5

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 08/24/2004
PATENT APPLICATION: **US/09/930,020B**   TIME: 10:35:46

Input Set : **A:\PTO.AMC.txt**
Output Set: **N:\CRF4\08242004\I930020B.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; Xaa Pos. 3

VERIFICATION SUMMARY   DATE: 08/24/2004
PATENT APPLICATION: **US/09/930,020B**   TIME: 10:35:46

Input Set : **A:\PTO.AMC.txt**
Output Set: **N:\CRF4\08242004\I930020B.raw**

L:367 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0

1600

RAW SEQUENCE LISTING   DATE: 08/23/2004
PATENT APPLICATION: US/09/930,020B   TIME: 15:58:57

Input Set : A:\PTO.FG.txt
Output Set: N:\CRF4\08232004\I930020B.raw

```
 3 <110> APPLICANT: Gish, Kurt C.
 4         Mack, David H.
 5         Wilson, Keith E.
 7 <120> TITLE OF INVENTION: Methods of diagnosis of colorectal cancer, compositions, and
 8         methods of screening for colorectal cancer modulators
10 <130> FILE REFERENCE: 05882.0168.CPUS01
12 <140> CURRENT APPLICATION NUMBER: US 09/930,020B
13 <141> CURRENT FILING DATE: 2001-08-14
15 <150> PRIOR APPLICATION NUMBER: US 09/663,733
16 <151> PRIOR FILING DATE: 2000-09-15
18 <160> NUMBER OF SEQ ID NOS: 3
20 <170> SOFTWARE: PatentIn version 3.2
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 3375
24 <212> TYPE: DNA
25 <213> ORGANISM: Homo sapiens
27 <400> SEQUENCE: 1
28 gacagtgttc gcggctgcac cgctcggagg ctgggtgacc cgcgtagaag tgaagtactt    60
30 ttttatttgc agacctgggc cgatgccgct ttaaaaaacg cgaggggctc tatgcacctc   120
32 cctggcggta gttcctccga cctcagccgg gtcgggtcgt gccgccctct cccaggagag   180
34 acaaacaggt gtcccacgtg gcagccgcgc cccgggcgcc cctcctgtga tcccgtagcg   240
36 cccctggcc cgagccgcgc ccgggtctgt gagtagagcc gcccgggcac cgagcgctgg   300
38 tcgccgctct ccttccgtta tatcaacatg cccccttttcc tgttgctgga ggccgtctgt   360
40 gttttcctgt tttccagagt gcccccatct ctccctctcc aggaagtcca tgtaagcaaa   420
42 gaaaccatcg ggaagatttc agctgccagc aaaatgatgt ggtgctcggc tgcagtggac   480
44 atcatgtttc tgttagatgg gtctaacagc gtcgggaaag ggagctttga aaggtccaag   540
46 cactttgcca tcacagtctg tgacggtctg gacatcagcc ccgagagggt cagagtggga   600
48 gcattccagt tcagttccac tcctcatctg gaattcccct tggattcatt ttcaacccaa   660
50 caggaagtga aggcaagaat caagaggatg gttttcaaag gagggcgcac ggagacggaa   720
52 cttgctctga aataccttct gcacagaggg ttgcctggag cagaaatgc ttctgtgccc   780
54 cagatcctca tcatcgtcac tgatgggaag tcccaggggg atgtggcact gccatccaag   840
56 cagctgaagg aaaggggtgt cactgtgttt gctgtggggg tcaggtttcc caggtgggag   900
58 gagctgcatg cactggccag cgagcctaga gggcagcacg tgctgttggc tgagcaggtg   960
60 gaggatgcca ccaacggcct cttcagcacc ctcagcagct cggccatctg ctccagcgcc  1020
62 acgccagact gcagggtcga ggctcacccc tgtgagcaca ggacgctgga gatggtccgg  1080
64 gagttcgctg gcaatgcccc atgctggaga ggatcgcggc ggacccttgc ggtgctggct  1140
66 gcacactgtc ccttctacag ctggaagaga gtgttcctaa cccacccctgc cacctgctac  1200
68 aggaccacct gcccaggccc ctgtgactcg cagccctgcc agaatggagg cacatgtgtt  1260
70 ccagaaggac tggacggcta ccagtgcctc tgcccgctgg cctttggagg ggaggctaac  1320
72 tgtgccctga agctgagcct ggaatgcagg gtcgacctcc tcttcctgct ggacagctct  1380
74 gcgggcacca ctctggacgg cttcctgcgg gccaaagtct tcgtgaagcg gtttgtgcgg  1440
76 gccgtgctga gcgaggactc tcgggcccga gtgggtgtgg ccacatacag cagggagctg  1500
78 ctggtggcgg tgcctgtggg ggagtaccag gatgtgcctg acctggtctg gagcctcgat  1560
```

```
 80 ggcattccct tccgtggtgg ccccaccctg acgggcagtg ccttgcggca ggcggcagag  1620
 82 cgtggcttcg ggagcgccac caggacaggc caggaccggc cacgtagagt ggtggttttg  1680
 84 ctcactgagt cacactccga ggatgaggtt gcgggcccag cgcgtcacgc aagggcgcga  1740
 86 gagctgctcc tgctgggtgt aggcagtgag gccgtgcggg cagagctgga ggagatcaca  1800
 88 ggcagcccaa agcatgtgat ggtctactcg gatcctcagg atctgttcaa ccaaatccct  1860
 90 gagctgcagg ggaagctgtg cagccggcag cggccagggt gccggacaca agccctggac  1920
 92 ctcgtcttca tgttggacac ctctgcctca gtagggcccg agaattttgc tcagatgcag  1980
 94 agctttgtga gaagctgtgc cctccagttt gaggtgaacc ctgacgtgac acaggtcggc  2040
 96 ctggtggtgt atggcagcca ggtgcagact gccttcgggc tggacaccaa acccacccgg  2100
 98 gctgcgatgc tgcgggccat tagccaggcc ccctacctag gtggggtggg ctcagccggc  2160
100 accgccctgc tgcacatcta tgacaaagtg atgaccgtcc agaggggtgc ccggcctggt  2220
102 gtccccaaag ctgtggtggt gctcacaggc gggagaggcg cagaggatgc agccgttcct  2280
104 gcccagaagc tgaggaacaa tggcatctct gtcttggtcg tgggcgtggg gcctgtccta  2340
106 agtgagggtc tgcggaggct tgcaggtccc cgggattccc tgatccacgt ggcagcttac  2400
108 gccgacctgc ggtaccacca ggacgtgctc attgagtggc tgtgtggaga agccaagcag  2460
110 ccagtcaacc tctgcaaacc cagcccgtgc atgaatgagg gcagctgcgt cctgcagaat  2520
112 gggagctacc gctgcaagtg tcgggatggc tgggagggcc cccactgcga gaccgtgag  2580
114 tggagctctt gctctgtatg tgtgagccag ggatggattc ttgagacgcc cctgaggcac  2640
116 atggctcccg tgcaggaggg cagcagccgt acccctccca gcaactacag agaaggcctg  2700
118 ggcactgaaa tggtgcctac cttctggaat gtctgtgccc caggtcctta gaatgtctgc  2760
120 ttcccgccgt ggccaggacc actattctca ctgagggagg aggatgtccc aactgcagcc  2820
122 atgctgctta gagacaagaa agcagctgat gtcacccaca aacgatgttg ttgaaaagtt  2880
124 ttgatgtgta agtaaatacc cactttctgt acctgctgtg ccttgttgag gctatgtcat  2940
126 ctgccacctt tcccttgagg ataaacaagg ggtcctgaag acttaaattt agcggcctga  3000
128 cgttcctttg cacacaatca atgctcgcca gaatgttgtt gacacagtaa tgcccagcag  3060
130 aggcctttac tagagcatcc tttggacggc gaaggccacg gcctttcaag atggaaagca  3120
132 gcagcttttc cacttcccca gagacattct ggatgcattt gcattgagtc tgaaaggggg  3180
134 cttgagggac gtttgtgact tcttggcgac tgccttttgt gtgtggaaga gacttggaaa  3240
136 ggtctcagac tgaatgtgac caattaacca gcttggttga tgatggggga ggggctgagt  3300
138 tgtgcatggg cccaggtctg gagggccacg taaaatcgtt ctgagtcgtg agcagtgtcc  3360
140 accttgaagg tcttc                                                    3375
143 <210> SEQ ID NO: 2
144 <211> LENGTH: 807
145 <212> TYPE: PRT
146 <213> ORGANISM: Homo sapiens
148 <400> SEQUENCE: 2
150 Met Pro Pro Phe Leu Leu Leu Glu Ala Val Cys Val Phe Leu Phe Ser
151 1               5                   10                  15
154 Arg Val Pro Pro Ser Leu Pro Leu Gln Glu Val His Val Ser Lys Glu
155                 20                  25                  30
158 Thr Ile Gly Lys Ile Ser Ala Ala Ser Lys Met Met Trp Cys Ser Ala
159         35                  40                  45
162 Ala Val Asp Ile Met Phe Leu Leu Asp Gly Ser Asn Ser Val Gly Lys
163     50                  55                  60
166 Gly Ser Phe Glu Arg Ser Lys His Phe Ala Ile Thr Val Cys Asp Gly
167 65                  70                  75                  80
170 Leu Asp Ile Ser Pro Glu Arg Val Arg Val Gly Ala Phe Gln Phe Ser
171                 85                  90                  95
174 Ser Thr Pro His Leu Glu Phe Pro Leu Asp Ser Phe Ser Thr Gln Gln
```

RAW SEQUENCE LISTING   DATE: 08/23/2004
PATENT APPLICATION: US/09/930,020B   TIME: 15:58:57

Input Set : A:\PTO.FG.txt
Output Set: N:\CRF4\08232004\I930020B.raw

```
175              100               105              110
178 Glu Val Lys Ala Arg Ile Lys Arg Met Val Phe Lys Gly Gly Arg Thr
179          115               120               125
182 Glu Thr Glu Leu Ala Leu Lys Tyr Leu Leu His Arg Gly Leu Pro Gly
183      130               135               140
186 Gly Arg Asn Ala Ser Val Pro Gln Ile Leu Ile Ile Val Thr Asp Gly
187 145               150               155               160
190 Lys Ser Gln Gly Asp Val Ala Leu Pro Ser Lys Gln Leu Lys Glu Arg
191              165               170               175
194 Gly Val Thr Val Phe Ala Val Gly Val Arg Phe Pro Arg Trp Glu Glu
195          180               185               190
198 Leu His Ala Leu Ala Ser Glu Pro Arg Gly Gln His Val Leu Leu Ala
199          195               200               205
202 Glu Gln Val Glu Asp Ala Thr Asn Gly Leu Phe Ser Thr Leu Ser Ser
203      210               215               220
206 Ser Ala Ile Cys Ser Ser Ala Thr Pro Asp Cys Arg Val Glu Ala His
207 225               230               235               240
210 Pro Cys Glu His Arg Thr Leu Glu Met Val Arg Glu Phe Ala Gly Asn
211          245               250               255
214 Ala Pro Cys Trp Arg Gly Ser Arg Arg Thr Leu Ala Val Leu Ala Ala
215          260               265               270
218 His Cys Pro Phe Tyr Ser Trp Lys Arg Val Phe Leu Thr His Pro Ala
219          275               280               285
222 Thr Cys Tyr Arg Thr Thr Cys Pro Gly Pro Cys Asp Ser Gln Pro Cys
223      290               295               300
226 Gln Asn Gly Gly Thr Cys Val Pro Glu Gly Leu Asp Gly Tyr Gln Cys
227 305               310               315               320
230 Leu Cys Pro Leu Ala Phe Gly Gly Glu Ala Asn Cys Ala Leu Lys Leu
231          325               330               335
234 Ser Leu Glu Cys Arg Val Asp Leu Leu Phe Leu Leu Asp Ser Ser Ala
235          340               345               350
238 Gly Thr Thr Leu Asp Gly Phe Leu Arg Ala Lys Val Phe Val Lys Arg
239          355               360               365
242 Phe Val Arg Ala Val Leu Ser Glu Asp Ser Arg Ala Arg Val Gly Val
243      370               375               380
246 Ala Thr Tyr Ser Arg Glu Leu Leu Val Ala Val Pro Val Gly Glu Tyr
247 385               390               395               400
250 Gln Asp Val Pro Asp Leu Val Trp Ser Leu Asp Gly Ile Pro Phe Arg
251          405               410               415
254 Gly Gly Pro Thr Leu Thr Gly Ser Ala Leu Arg Gln Ala Ala Glu Arg
255          420               425               430
258 Gly Phe Gly Ser Ala Thr Arg Thr Gly Gln Asp Arg Pro Arg Arg Val
259      435               440               445
262 Val Val Leu Leu Thr Glu Ser His Ser Glu Asp Glu Val Ala Gly Pro
263      450               455               460
266 Ala Arg His Ala Arg Ala Arg Glu Leu Leu Leu Leu Gly Val Gly Ser
267 465               470               475               480
270 Glu Ala Val Arg Ala Glu Leu Glu Glu Ile Thr Gly Ser Pro Lys His
271          485               490               495
```

RAW SEQUENCE LISTING   DATE: 08/23/2004
PATENT APPLICATION: **US/09/930,020B**   TIME: 15:58:57

Input Set : **A:\PTO.FG.txt**
Output Set: **N:\CRF4\08232004\I930020B.raw**

```
274 Val Met Val Tyr Ser Asp Pro Gln Asp Leu Phe Asn Gln Ile Pro Glu
275         500             505             510
278 Leu Gln Gly Lys Leu Cys Ser Arg Gln Arg Pro Gly Cys Arg Thr Gln
279         515             520             525
282 Ala Leu Asp Leu Val Phe Met Leu Asp Thr Ser Ala Ser Val Gly Pro
283         530             535             540
286 Glu Asn Phe Ala Gln Met Gln Ser Phe Val Arg Ser Cys Ala Leu Gln
287 545             550             555             560
290 Phe Glu Val Asn Pro Asp Val Thr Gln Val Gly Leu Val Val Tyr Gly
291         565             570             575
294 Ser Gln Val Gln Thr Ala Phe Gly Leu Asp Thr Lys Pro Thr Arg Ala
295         580             585             590
298 Ala Met Leu Arg Ala Ile Ser Gln Ala Pro Tyr Leu Gly Gly Val Gly
299         595             600             605
302 Ser Ala Gly Thr Ala Leu Leu His Ile Tyr Asp Lys Val Met Thr Val
303         610             615             620
306 Gln Arg Gly Ala Arg Pro Gly Val Pro Lys Ala Val Val Val Leu Thr
307 625             630             635             640
310 Gly Gly Arg Gly Ala Glu Asp Ala Ala Val Pro Ala Gln Lys Leu Arg
311         645             650             655
314 Asn Asn Gly Ile Ser Val Leu Val Val Gly Val Gly Pro Val Leu Ser
315         660             665             670
318 Glu Gly Leu Arg Arg Leu Ala Gly Pro Arg Asp Ser Leu Ile His Val
319         675             680             685
322 Ala Ala Tyr Ala Asp Leu Arg Tyr His Gln Asp Val Leu Ile Glu Trp
323         690             695             700
326 Leu Cys Gly Glu Ala Lys Gln Pro Val Asn Leu Cys Lys Pro Ser Pro
327 705             710             715             720
330 Cys Met Asn Glu Gly Ser Cys Val Leu Gln Asn Gly Ser Tyr Arg Cys
331         725             730             735
334 Lys Cys Arg Asp Gly Trp Glu Gly Pro His Cys Glu Asn Arg Glu Trp
335         740             745             750
338 Ser Ser Cys Ser Val Cys Val Ser Gln Gly Trp Ile Leu Glu Thr Pro
339         755             760             765
342 Leu Arg His Met Ala Pro Val Gln Glu Gly Ser Ser Arg Thr Pro Pro
343         770             775             780
346 Ser Asn Tyr Arg Glu Gly Leu Gly Thr Glu Met Val Pro Thr Phe Trp
347 785             790             795             800
350 Asn Val Cys Ala Pro Gly Pro
351         805
354 <210> SEQ ID NO: 3
355 <211> LENGTH: 5
356 <212> TYPE: PRT
357 <213> ORGANISM: Homo sapiens
360 <220> FEATURE:
361 <221> NAME/KEY: misc_feature
362 <222> LOCATION: (3)..(3)
363 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
365 <400> SEQUENCE: 3
```

RAW SEQUENCE LISTING   DATE: 08/23/2004
PATENT APPLICATION: **US/09/930,020B** TIME: 15:58:57

Input Set : **A:\PTO.FG.txt**
Output Set: **N:\CRF4\08232004\I930020B.raw**

```
W--> 367 Trp Ser Xaa Trp Ser
     368 1              5
     377 DM_US\8051138.v1
     381 DM_US\8051138.v1
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 08/23/2004
PATENT APPLICATION: **US/09/930,020B**   TIME: 15:58:58

Input Set : **A:\PTO.FG.txt**
Output Set: **N:\CRF4\08232004\I930020B.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; Xaa Pos. 3

VERIFICATION SUMMARY   DATE: 08/23/2004
PATENT APPLICATION: **US/09/930,020B**   TIME: 15:58:58

Input Set : **A:\PTO.FG.txt**
Output Set: **N:\CRF4\08232004\I930020B.raw**

L:367 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0